ANNEX B

PROGRAMMATIC SECTION 404(b)(1) EVALUATION

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LAKEBELT PROJECT MIAMI-DADE COUNTY, FLORIDA

PREFACE This document is a programmatic Section 404(b)(1) Evaluation. As such it addresses, at a general level, the potential environmental effects of the wetland and aquatic ecosystem alterations expected from the construction of the structural components of the recommended plan. Subsequent site-specific Section 404(b)(1) Evaluations will be done for individual permit actions in sufficient detail for final decision making and for full compliance with the Section 404(b)(1) Guidelines and National Environmental Policy Act requirements.

1. PROJECT DESCRIPTION

a. Location. The proposed Lakebelt project is located in Miami-Dade County, Florida.

b. General Description. The project area encompasses approximately 57,000 acres. The project area currently contains 5,000+ acres of quarry lakes. The recommended plan would allow approximately 15,000+ acres of quarry lakes for a total of approximately 21,000 acres. The recommended plan also contains mitigation elements that will mitigate for some of the wetland functions and values lost through the project construction, as well as hydrologic features to improve the hydrology of surrounding wetlands.

c. Authority and Purpose. Section 404 of the Clean Water Act requires permits for discharge of fill material in Waters of the United States. The need for the Lakebelt project is discussed in Section 2 of the DEIS.

d. General Description of Dredged or Fill Material.

(1) General Characteristics of Material. The fill material for this project will be native limerock excavated from quarry lakes and deposited in a windrow before transfer to the mill.

(2) Quantity of Material. Unknown - will be determined during detailed design.

(3) Source of Material. Quarry lakes within the study area.

e. Description of the proposed Discharge Site.

(1) Location. Within the Lakebelt study area.

(2) Size. Approximately 15,000+ acres of wetlands will be converted to quarry lakes by the project.

(3) Type of Site. The project site consists of a mixture of wetland communities and agricultural fields.

(4) Type of Habitat. The habitat consists of remnant Everglades wetlands that are being invaded by melaleuca.

(5) Timing and Duration of Discharge. Complete mine-out will take approximately 50-years.

f. Description of Disposal Method. Fill material would be excavated from quarry lakes within the study area.

2. FACTUAL DETERMINATION

a. Physical Substrate Determination.

(1) Substrate Elevation and Slope. The area to be filled ranges in elevation from 3 to 10 feet NGVD of 1929. Fill areas are relatively flat work pads. Top soil is removed and stockpiled for later use in the construction of littoral zone wetlands.

(2) Sediment Type. Soil in the fill areas is predominately organic muck, which is removed and stockpiled for later use in the construction of littoral zone wetlands. Work pads are constructed from limestone bedrock.

(3) Dredge/Fill Material Movement. The fill material will be windrowed on the work pad prior to transfer to the milling facilities.

(4) Physical Effects on Benthos. No benthic organisms are within the fill areas.

b. Water Circulation, Fluctuation and Salinity Determination.

(1) Water. Standing water or moist soil will be replaced by open water quarry lakes.

(2) Current Patterns and Circulation. N/A

(3) Normal Water Level Fluctuations and Salinity Gradients. The resulting project lakes will have direct connection to the Biscayne aquifer. The aquifer level

and surrounding flood control features will affect normal water level fluctuations and salinity gradients.

c. Suspended Particulate/Turbidity Determinations.

(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site. Temporary impacts may result from the placement of fill during construction. Any increase in turbidity will be confined to the vicinity of the activity and would not be expected to continue after construction.

(2) Effects on the Chemical and Physical Properties of the Water Column.

(a) Light Penetration. The project will not change existing conditions.

(b) Dissolved Oxygen. The project will not change existing conditions.

(c) Toxic Metals, Organics, and Pathogens. No toxic metals, organics, or pathogens will be released by the project.

(d) Aesthetics. The project will not change existing conditions.

(3) Effects on Biota.

(a) Primary Productivity and Photosynthesis. Quarry lakes will convert approximately 15,000+ acres of wetlands and eliminate their primary productivity. The lakes and associated littoral zones will replace some of the functions and values lost by the conversion of these wetlands.

(b) Suspension/Filter Feeders. There will be no long-term adverse impact to suspension/filter feeders.

(c) Sight Feeders. There will be no long-term adverse impact to sight feeders.

d. Contaminant Determinations. Deposited fill material will not introduce, relocate, or increase contaminants.

e. Aquatic Ecosystem and Organism Determinations.

(1) Endangered and Threatened Species. There will be no impacts on any threatened or endangered species or on critical habitat of any threatened or endangered species.

(2) Hardbottom Habitat. No hardbottom habitat exists in the project area.

f. Proposed Disposal Site Determinations.

(1) Mixing Zone Determination. The fill material will not cause unacceptable changes in the mixing zone specified in the Water Quality Certification in relation to: depth, current velocity, direction and variability, degree of turbulence, stratification, or ambient concentrations of constituents.

(2) Determination of Compliance with Applicable Water Quality Standards. Because of the inert nature of the fill material state water quality standards will not be violated.

(3) Potential Effects on Human Use Characteristics.

(a) Municipal and Private Water Supplies. The Northwest Well field maybe impacted by the project. Studies are currently under way to make this determination.

(b) Recreational and Commercial Fisheries. Recreational and commercial fisheries will not be impacted by the disposal of dredged material in the project area.

(c) Water Related Recreation. Water related recreation will be preserved and enhanced by the proposed project.

(d) Aesthetics. Project features will be in keeping with general characteristics of the area.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. The construction of the Lakebelt project will not effect any parks, national or historic monuments, national seashores, wilderness areas, research sites, or similar preserves.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. There will be no cumulative impacts that result in a major impairment of water quality of the existing aquatic ecosystem as a result of the placement of fill at the project site.

3. FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

a. No significant adaptations of the guidelines were made relative to this evaluation.

b. No practicable alternative exists which meets the study objectives that does not involve discharge of fill into waters of the United States.

c. The discharge of fill materials will not cause or contribute to, after consideration of disposal site dilution and dispersion, violations of any applicable State water quality standards for Class III waters. The discharge operation will not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

d. The disposal of fill material in the project area will not jeopardize the continued existence of any species listed as threatened or endangered or result in the likelihood of destruction or adverse modification of any critical habitat as specified by the Endangered Species Act of 1973, as amended.

e. The placement of fill material will not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic species and other wildlife will not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values will not occur.

f. On the basis of the guidelines, the proposed disposal site for the discharge of dredged material is specified as complying with the requirements of these guidelines.